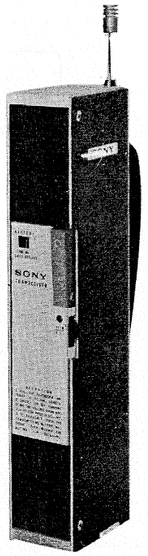


Specifications

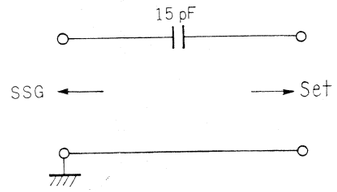
Circuit :	Transmitting section : Crystal controlled circuit
	Receiving section : 8 transistor superheterodyne with tuned RF stage using crystal local oscillator
Semi-conductors :	10 transistors, 2 diodes
Antenna System :	Built-in monopole telescopic antenna 4′6″
Frequency :	27 Mc Citizens Band (pre-set on channel 11, 27.085 Mc, at the factory)
Input Power to Final Stage :	100 mW maximum
Frequency Drift :	±0.005%
Current Drain :	Receiving : 6.8 mA at zero signal
	Transmitting : 15.7 mA without modulation
Receiver Sensitivity :	2μV/m (at 50 mW output)
Intermediate Frequency :	455 kc
Audio Output Power :	310 mW (undistorted)
	500 mW (maximum)
Microphone :	Magnetic type
Speaker :	2-1/4″ (57 mm) PM dynamic, 8Ω
Batteries :	12 V, size AA Penlight Batteries, 1.5 V×8
Dimensions :	1-5/8 (W) ×9-5/16 (H) ×2-11/16″ (D)
	(42×237×68 mm)
Weight :	1 lb. 10 oz.
Effective Distance :	In the town : 500～1,000 m (0.3～0.6 miles)
	In the suburbs : 3～4 km (2～2.5 miles)
	On the sea : 5～20 km (3～12.5 miles)

Adjustment

RECEIVER

Transmitter/Receiver Selector Button ..... Receiving position (not pushed)
Volume Control ..... Maximum Volume Position
Telescopic Antenna ..... Any Position
Signal Source ..... Use a SSG (Standard Signal Generator) which can deliver RF signals modulated at 30% with 1,000 c/s.
Load for Output : Connect an 8 ohms resistor instead of speaker.
Output Meter : Connect across the Load Resistor.
(VTVM can be used also.)

(1) Connect the SSG to the copper foil marked with ★ shown in Fig. 4 and ground through the Dummy Antenna as shown in Fig. 1.
(2) Disconnect the Telescopic Antenna from the Printed Circuit Board by removing the Screw (F2×6) marked with △ shown in Fig. 7.
(3) Deliver a 27.085 Mc signal from the SSG.
(4) Turn the core of RF Coil (RF•C) and Antenna Coil (ANT•C) in turn for several times until the VTVM reads maximum.

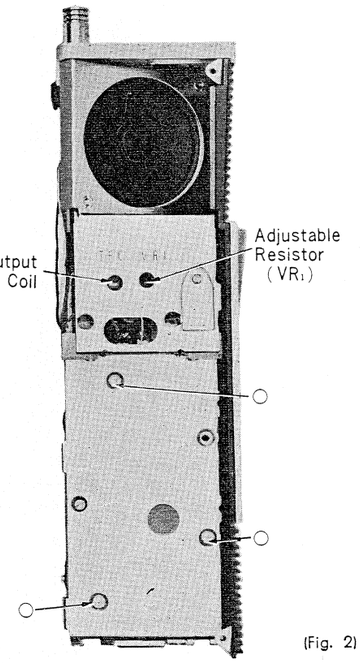


(Fig. 1)

TRANSMITTER

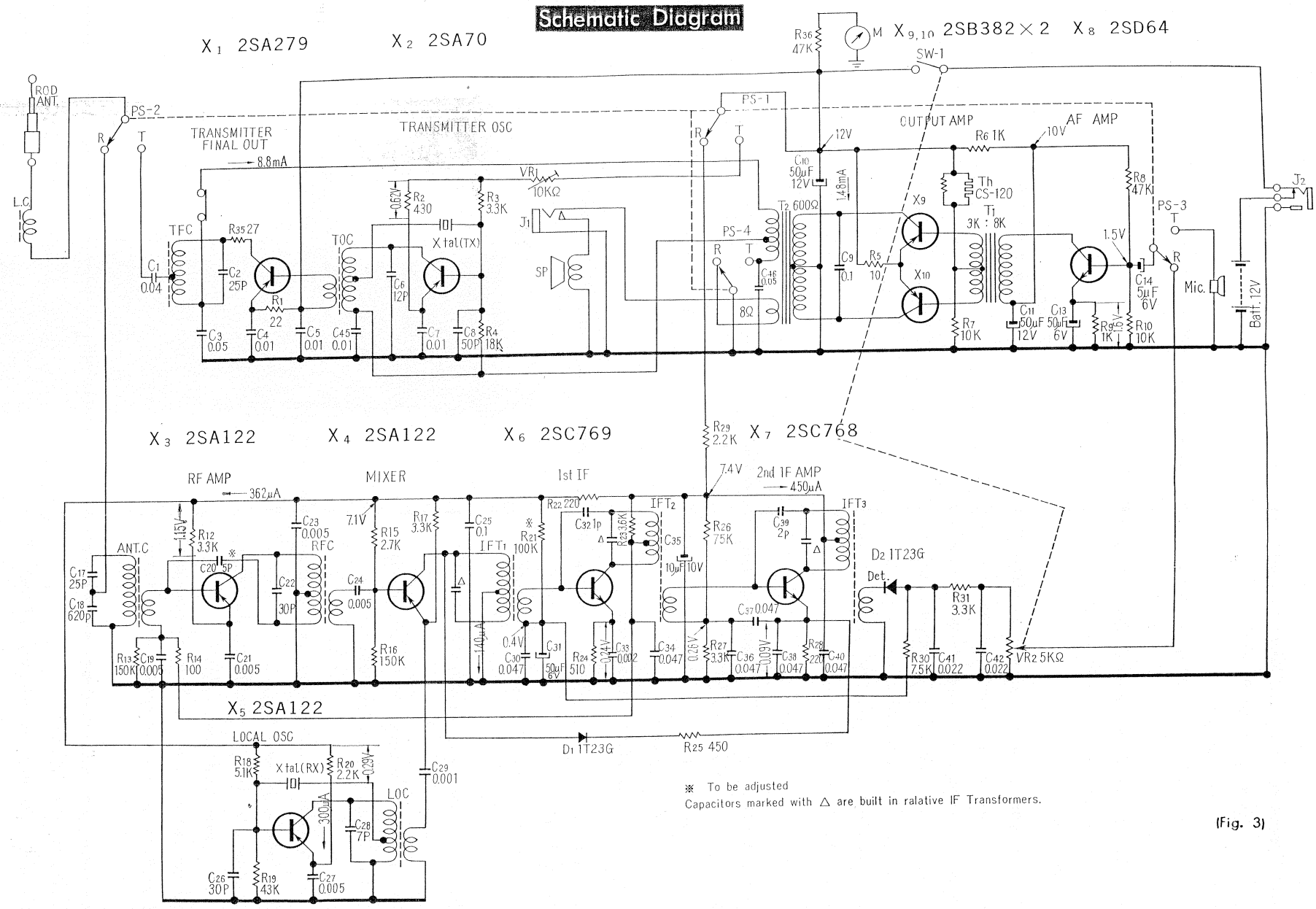
Transmitter/Receiver Selector Button ..... Transmitting position (pushed)
Telescopic Antenna ..... Stretch to the full.
Volume Control ..... Any Position
DC Ammeter ..... 15 mA full scale.
Field Strength Meter ..... for 27 Mc citizen band

(1) Unsolder the connection between the positions marked with ○ and ● in Fig. 4 near T_1 and insert the Ammeter between them.
(2) Connect a Resistor, 39 ohms, between marked with △ and ▲ shown in Fig. 4.
(3) Connect the VTVM across the Load Resistor connected by the preceding step (2) through the Probe.
(4) Turn the core of Transmitter Oscillator Coil (TO.C) counter-clockwise until the oscillation of set stops and then turn it clockwise by 2 turns.
(5) Turn the core of Transmitter Final Output Coil (TF.C) to obtain the maximum reading on the VTVM.
(6) Adjust the Potentiometer (VR1) until the Ammeter reads between 9.1 mA and 9.2 mA. (as near 9.2 mA as possible).
(7) Repeat the above procedures (5), (6) and (7) for several times.
(8) Set the Field Strength Meter at 1～3 meters away from the Transmitter.
(9) Turn the core of Loading Coil (L.C) to obtain the maximum reading on the Field Strength Meter.
(10) Be sure that the Ammeter indicates approximately 9.2 mA. If not, readjust the potentiometer (VR_1) for the correct reading on the Ammeter.



(Fig. 2)

Schematic Diagram

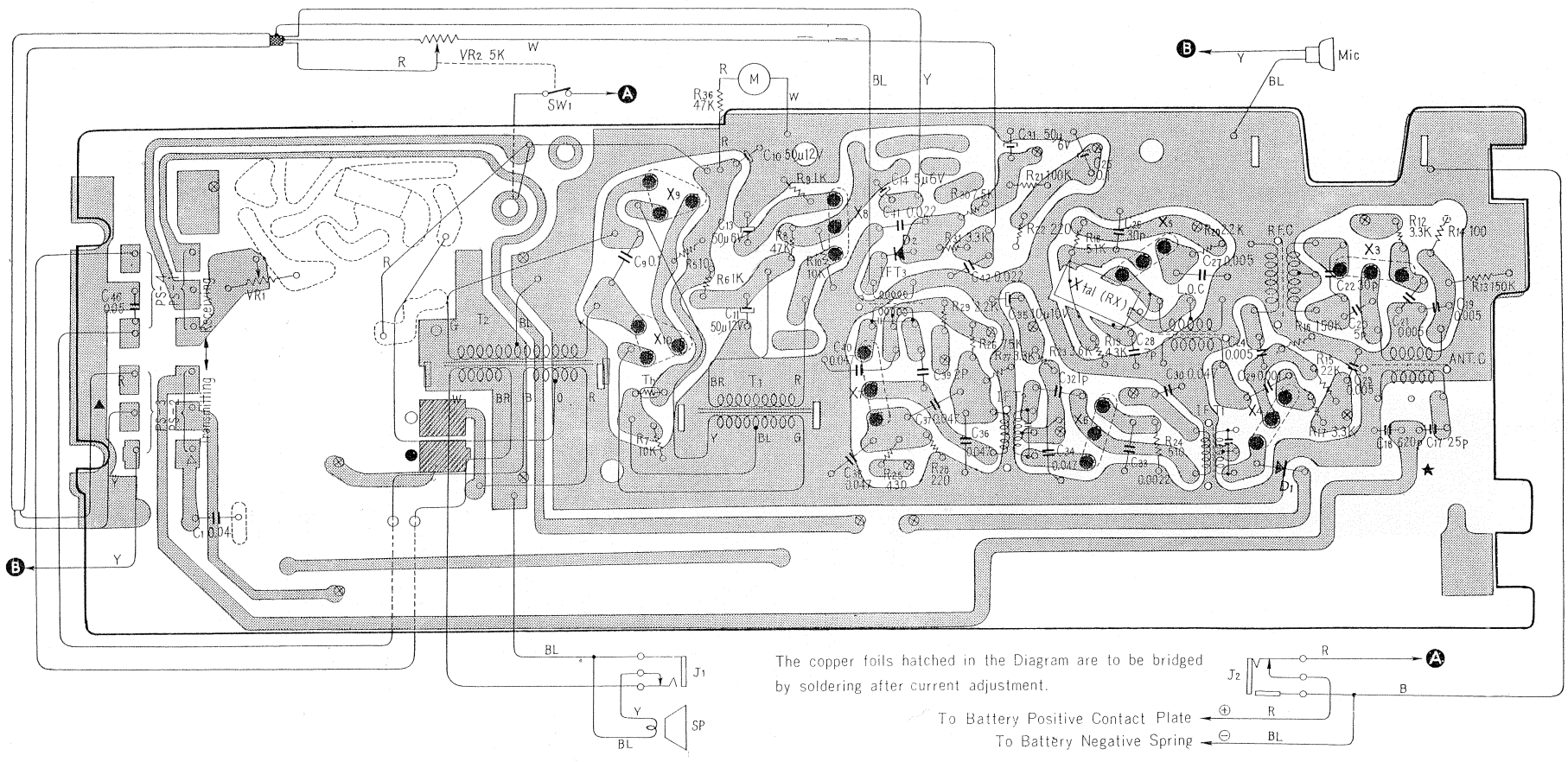


※ To be adjusted
Capacitors marked with △ are built in ralative IF Transformers.

(Fig. 3)

Mounting Diagram

Receiving Section
—Printed Side—



The copper foils hatched in the Diagram are to be bridged by soldering after current adjustment.

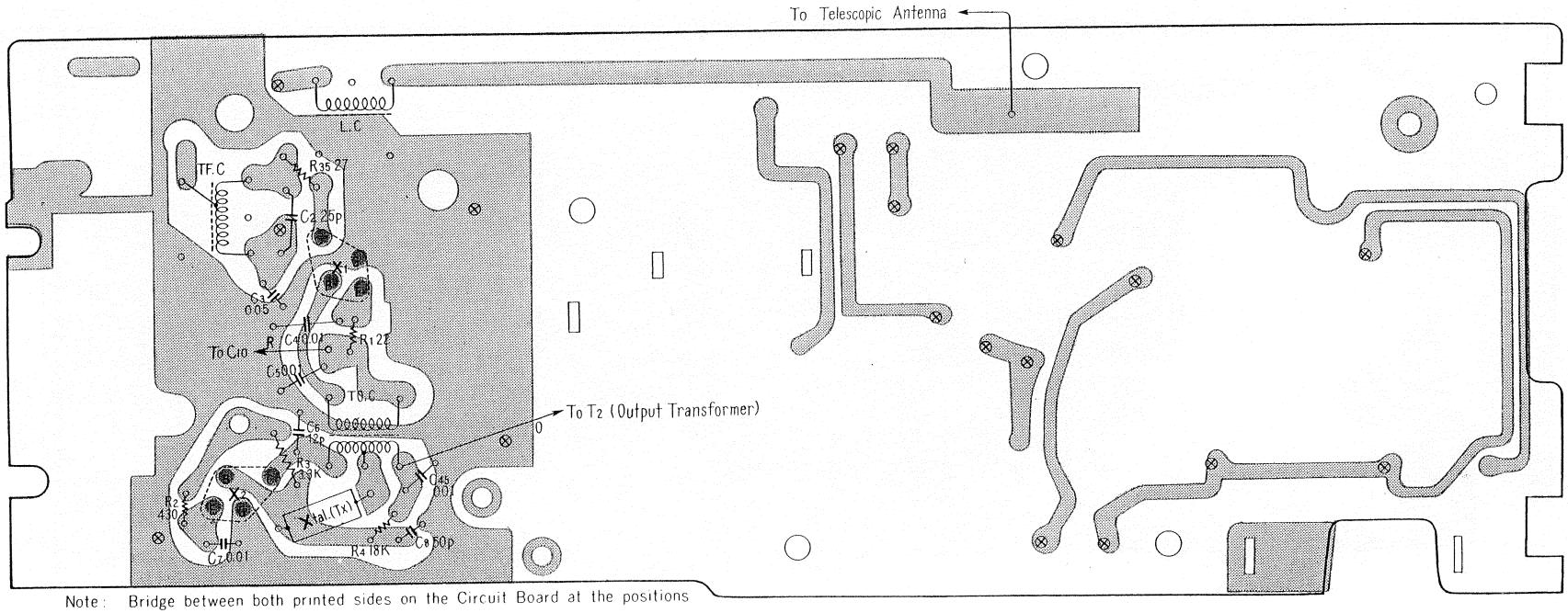
To Battery Positive Contact Plate
To Battery Negative Spring

(Fig. 4)

Mounting Diagram

Transmitting Section

— Printed Side —



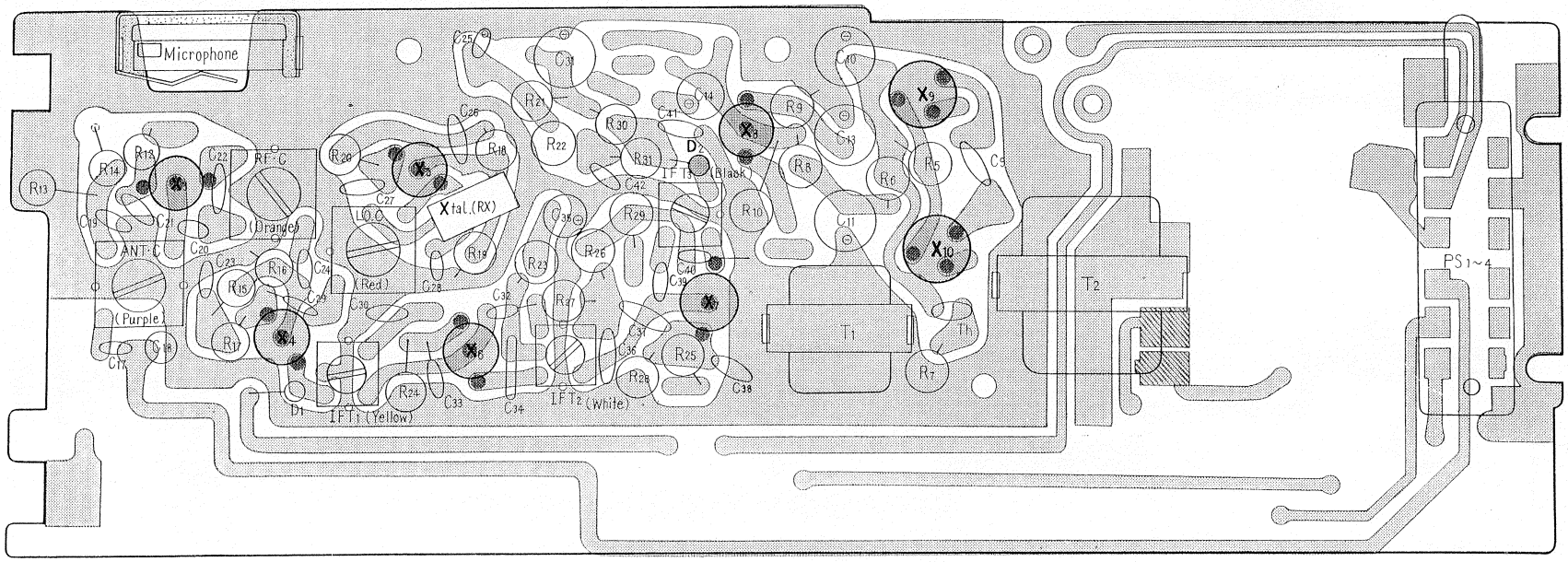
Note: Bridge between both printed sides on the Circuit Board at the positions indicated with ⊗ by using Rivets.

(Fig. 5)

Mounting Diagram

Receiving Section

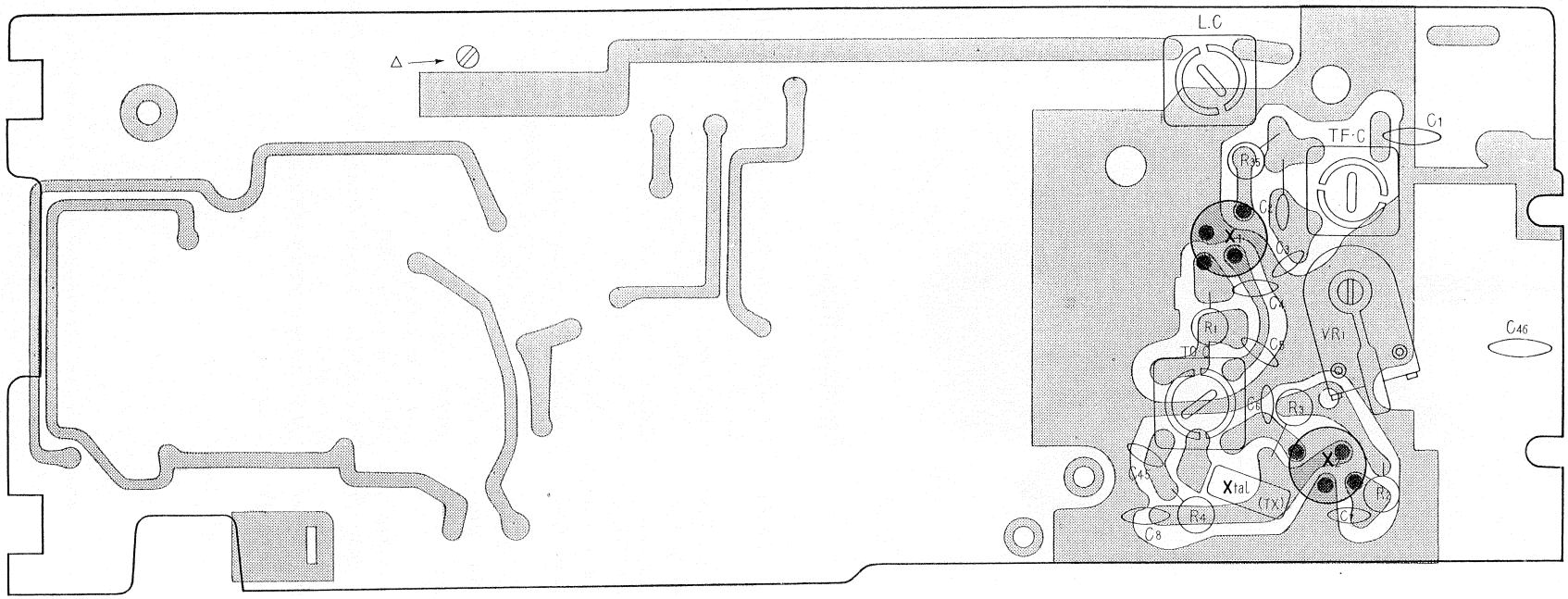
– Parts Side –



(Fig. 6)

Mounting Diagram

Transmitting Section
–Parts Side–



(Fig. 7)